been removed, element 400 passes to element 404 the identity of that device, say, for example, "LUN 1." Element 404 searches for a moid object representing that LUN. The search can be performed in a store, database or other runtime or persistent store containing such storage device-representative moid objects and, depending on implementation, other moid objects as well.

Like the moid objects that represent attributes and relationships, each storage device-representative moid object is associated with a moid object that represents a scan. These associations reflect which scans contain information about which component, attribute or relationship. As information regarding any given component, attribute or relationship may be contained in more than one scan, there may be multiple moid objects for that component, attribute or relationship, each associated with a moid object for a different scan -- or, depending upon implementation, there may by only one moid object for that component, attribute or relationship with multiple associations to the different scans.

In the illustration, associations are represented by dashed lines. The associations may be maintained in the moid objects themselves and/or in an associated store, database or other runtime or persistent store.

Continuing the example, by searching for moid objects representing a storage device that has been removed, the element 404 identifies, through the associations, which scans contain information regarding that storage device. Information pertaining to that device from those scans can then be compared (e.g. by element 404) with the information being validated. No

comparison need be made with the scan that *itself* contains the information being validated. In case there is no discrepancy, the change that gave rise to the validation is indeed passed to the manager service 38.

In case the comparison reveals there is a discrepancy, the identified scans and/or the scan in which the change was initially detected can be re-executed, e.g., by way of request issued from element 404. Alternatively, the apparent change can be ignored – as is the case in embodiments where removal events are ignored unless not contradicted by other scans.

The foregoing mechanism is used to validate information regarding not only SAN components, but their attributes and relationships as well. A more complete understanding may be attained via the discussion that follows.

In order to perform the above diagnostics efficiently, the discover engine 40 needs to associate each scanner with the storage devices seen by that scanner. That is, the discover engine 40 needs to maintain not only information regarding association of a host with one or more storage devices but also information that links a scanner on that host with those storage devices seen by that scanner.

The illustrated embodiment utilizes a methodology that allows the discover engine 40 to maintain such data in a manner such that the needed information, e.g., which scans previously saw a particular storage device, can be retrieved in an efficient manner.

In general, a database or other storage environment can be used to represent an "association" between two objects, as shown schematically below:

<object> ... <association> ... <object>

However, some of the information detected by a scanner is itself relationship information that indicates association between two objects. That is, scanners not only detect devices, but they also detect, *inter alia*, relationships between devices, attribute information, and logical entities, e.g., to which volume group a storage device belongs. Such an association between an object and another association can be schematically depicted as follows:

<object> ... <association> ... <relationship>.

The illustrated embodiment provides for the retrieval of such information, by generating moid objects (or other data structures) for each SAN component, attribute or relationship which may form part of such an association. This means forming objects not only for storage devices, hosts, and so forth, but also objects representing attributes and relationships, such as "Host 1 is assigned to LUN 1" or "Physical device A contains LUN 4" or "LUN 1 is a fiber channel device." These objects can be stored in a persistent storage, e.g., an object database and each can hold a unique identification corresponding to the component or association that it represents. In this manner, each scan, which is also represented by an object, can be related to any information discovered during the scan, whether it relates to a device or a relationship.